Lee (Jas)

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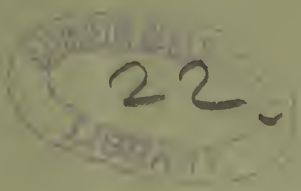
OF

# SARATOGA COUNTY.

COMMUNICATED TO THE MEDICAL SOCIETY OF THE STATE OF NEW YORK, FEB. 2, 1859.



# DISEASES

OF

# SARATOGA COUNTY.

Communicated to the Medical Society of the State of New York.

BY JAMES LEE, M. D.,

MECHANICVILLE, SARATOGA COUNTY.



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# DISEASES OF SARATOGA COUNTY.

In compliance with a resolution of this Society, the following report upon the diseases the county of Saratoga is herewith presented.

The limits to which I must necessarily confine this report, will not permit me to enter upon anything like a detail of the topographical peculiarities or physical geography of that portion of territory to which it refers. Yet I cannot faithfully discharge the duties which your resolution imposes upon me, without in a rapid manner glancing at the face of the country, and pointing out some of the distinctive features which characterize it; for every medical man is fully aware of the important influence of natural formation and locality upon the health of the inhabitants of any district of country, both in giving rise to anomalous features in our most common forms of disease, and in originating others wholly unknown to our systems of Nosology.

*Description of the county of Saratoga.*—Most of this county is situated north of the 43d degree of north latitude, and in longitude east three degrees from Washington. It is bounded on the east by the Hudson River, on the north by the Hudson River and a portion of the county of Warren, on the west by the counties of Hamilton and Fulton, and on the south by the Mohawk river. Its population is about fifty thousand.

It is abundantly supplied with water by the rivers and large streams, and by the numerous small lakes and springs within its boundaries.

The streams and rivers passing through it have nearly all of them rapid currents, thus affording a ready exit for the surface water, and preventing the formation of wet or marshy districts to any great extent.

The prevailing winds are westerly, with occasional variations to the north, north east and south. These winds are frequently very strong, in consequence of the long unobstructed reach they have from the west, and when added to the influence of solar heat

during summer upon our sandy or gravelly soil, they are productive of extreme droughts.

The temperature ranges from a maximum of +96° Fahrenheit in summer, to a minimum of —26° in winter.

The barometer exhibits a mean range 29.090 inches, along the valley of the Hudson, with a slight depression from this in the higher interior and northern portions.

The inhabitants are chiefly engaged in agricultural pursuits, and reside in rural districts; although there are several villages containing from 1,000 to 6,000 inhabitants, where considerable manufacturing business is done.

The geological developments of this county may be enumerated and located as follows, viz: The flats and elevated plains of the Hudson and Mohawk rivers belong to the quarternary system, as described by our State geologists; and the high mountainous districts of the interior, northern and western portions belong to the primary system.

The valley of the Mohawk, and that of the Hudson, below the mouth of the Hoosic river, are composed of deposit belonging to the alluvial division. These alluvions are composed of ooze, and contain portions of lime mixed with argilo-silicious and organic matter, which render the soil fertile and vegetable growths luxuriant. In many portions of this division there is afforded an abundant supply of decomposing material and a consequently increased amount of miasmata is generated. The evil arising from this source has, however, been greatly remedied by the digging of the Champlain canal throughout nearly the whole length of one of the divisions, and the Erie canal through the other.

The completion of these two great public works has contributed more towards ridding this county from miasmatic diseases than perhaps could have been accomplished by any direct effort towards a sanitary improvement of this locality, for with our peculiar facilities, they effect the most perfect drainage of our alluvial districts; and although we are not entirely freed from the influence of marsh miasmata as an exciting cause of disease, the virulence of those diseases depending upon this influence has been greatly mitigated.

Limestone formations are found in abundance in the northern parts of the county, and alluvions from deposit are also to be noticed in their immediate vicinity.

Alum and sulphate of alumina are found in small quantities in

several localities, but not sufficiently abundant to render these deposits important.

Muriate of lime is very abundant along the valley of the Hudson, and its admixture with the water in the springs and wells in this range, serves to render the water hard and unfit for laundry use by its power of decomposing the soap necessary for that purpose. I have not, however, witnessed such marked effect from this admixture as might by some be anticipated, in the production of lithiasis.

Mineral springs are found in great variety and abundance in several portions of this county.

A chalybeate spring of some notoriety and use is located at Ballston Spa, and several others of less repute have been discovered, but not brought into public notice.

Hepatic or sulphur springs are found in various parts, generally issuing from fissures in the black slate formations of the Hudson river group. The most noted of these is situate at the south end of Saratoga lake, and its waters really possess some merit in the treatment of certain forms of cutaneous diseases, where the mild preparations of sulphur are indicated; but it should not be used in the form of a warm bath, as was attempted by certain enterprising individuals who founded a bathing establishment there a few years ago; for the application of heat causes the water to part with every vestige of its efficacious properties, in the form of vapor, and the residue has no superiority to common water.

The far famed acidulous mineral waters of Saratoga Springs are too familiar to require anything more than a mere mention. These waters are dependent for their medical virtues upon an abundant supply of carbonic acid gas, chloride of sodium, and the carbonates of lime magnesia and soda. These springs, during a small portion of the year, are a grand point of attraction to both the valetudinarian and the votary of fashion, and from a variety of motives thousands of persons congregate there during the fashionable season, thus giving almost a metropolitan consequence, for a few months in the year, to a village of some six thousand inhabitants.

The mineral springs of Ballston Spa, in years past, held a rank fully equal if not superior to those at Saratoga Springs; but lately, they have become so much diluted by the water of the Kayaderosseras creek, that their mineral properties are impaired to such an extent as to render them both unpalatable and unpopular.

Sulphate of iron, bog iron ore, and a few other mineral productions are found in moderate quantities; and magnetic iron ore is abundantly found in the primary formations located south of the mouth of the Sacondaga river, near Hadley's falls, and in a few other localities.

Along the banks of the rivers and their tributaries, the clay and gravel beds of the quarternary system are to be found. Their external characters consist of different varieties of sand, grey and buff colored clay and blue clay. The topographical character of this formation is that of slightly undulating and nearly level plains, which usually extend back from the banks of the streams until they intermix with the high grounds. Its agricultural character varies much, accordingly as the clay or sand predominates. This fact is easily demonstrated by comparing the land situated along the banks of the streams, and in their valleys, with the great number of sand plains that are found in various portions of the county.

These sand plains are varied in character, ranging from those composed of light drift sand to such as are covered by a stunted growth of pine and scrub-oaks, or those that have been rendered measurably fertile by the efforts of the husbandman.

The clayey soils were formerly covered with heavy pines, oaks, etc. These are the lands best suited to the varied pursuits of the agriculturist. Gravel beds are freely interspersed throughout this formation; and all of these varieties overlie the formations of slate, limestonne, grit and other rocks peculiar to this system.

The sand plains of Saratoga are composed of fine grains of quartz, feldspar, garnet, horn-blende, or magnetic oxide of iron. These plains, together with the gravel deposits, are believed by the best authorities to have been formed "at the confluence of great valleys through which currents of water have flowed, and consequent eddies to have been formnd, in which matter held in suspension wonld be precipitated." The correctness of this supposition may be easily verified by an examination of their general structure, for it will almost invariably be found that this precipitation has taken place in uniformity with the specific gravity of the matter held in suspension, modified in a certain degree by the velocity of the current.

These plains are located at the junction of what are termed in the geolegical survey of the State, "the upper Hudson valley from the west, and the Champlain valley from the north." Their influence on the health of the inhabitants of their vicinity is not

an unimportant one, for from their extent, and the action of the heat of the sun upon them, they produce an arid state of atmosphere that by most medical men is thought to be conducive to the prevalence of dysentery. How far this may be the case I am not prepared by experience to answer; but I am sure that by means of the mechanical irritation which is produced by their fine particles in the atmosphere, during the prevalence of high winds, many cases of ophthalmia are originated; and the effect of this same agency in aggravating, if it does not produce diseases of the respiratory system, is very apparent.

Formations belonging to the drift division are found in many localities, and where they are not covered by the quarternary and alluvial deposits, the surface is hilly, the hills of that rounded character termed hillocks, with bowl-shaped cavities between them.

Boulders and pebbles are frequently met with in this formation.

Where the Hudson river slate is met with, and nearly underlies the soil, as it does in many places, it renders the substratum nearly impervious to water; and were it not that in such localities the surface is uneven, and this slate of a character that is readily disintegrated by the action of the moisture and frosts, we should often meet with a wet and cold soil; but as it is, we have generally a mellow, warm and dry one.

The following section from an excavation in the town of Galway, will illustrate the arrangement of strata in that portion of the county:

| | | Feet | in. |
|---|---|---|---|
| Stratum 1. | Argillaceous conglomerate, | 1 | 2 |
| 2. | Limestone, | | 9 |
| 3. | Limestone argillaceous, | | 9 |
| 4. | Gray silicious (hard) sand stone, | 40 | 0 |
| 5. | White do do | 2 | 3 |
| 6. | Gray do do | 25 | 0 |
| 7. | Quartz, | 10 | 0 |
| 8. | Silicious fissile slate, | 15 | 0 |
| 9. | Whitish quortzose sand stone, | 8 | 0 |
| 10. | Sand stone, (slaty,) | 6 | 0 |
| 11. | do (compact,) | Not known. | |
| 12. | Primary rocks, gneiss, etc., | Not known. | |

About two-fifths of the county is occupied by the primary formation. Lines drawn a little south of west, to the west part of the county, and a little east of north, to the Hudson river, from

Saratoga Springs, would include all, or nearly all, of this formation.

The external boundary of this district is irregularly curved and serrated, in consequence of the chains of hills of primary rocks stretching to the south, and of the numerous valleys jutting into them, "like water on an irregular line of coast."

"By far the largest part of this area is in a state of nature, covered with timber, and by many considered of little value when the pine timber is cut off." The soil, though rough and stony, and generally mountain land, produces good crops when cultivated. The rocks of this region are mostly gneiss, gray and reddish granite, which is frequently blended with garnets, hornblende, or magnetic oxide of iron.

The county of Saratoga, considered in its various aspects, may, from a bestowal of natural bounties by a kind Providence, be classed, for sanitary advantages, with the most favored of our highly favored State; yet we cannot claim any extraordinary exemption from the ills to which frail humanity is subjected, for a list of our diseases would be found to embrace nearly all the varieties which are incident to our climate. Of this number I shall proceed to notice such as have been marked by any peculiarities, or have prevailed epidemically, and in pursuing this notice I shall commence at a comparatively recent period, and as nearly as may be, proceed in a chronological order.

*Of Epidemic Cholera.*—This scourge of the human race has visited the villages of our county at each period of its general visitation to this country, but I should not have alluded to it, were it not that at Mechanicville, in this county, occurred the first case of this disease, that was known in the United States. This fact, though not generally understood by the profession, is perfectly well authenticated, and was reported for the local newspaper of that period, by my friend, Dr. William Tibbetts. This was an imported case, and occured in a family of emigrants, who landed in Canada, and were on their passage down the Champlain canal.

*Scarlatina.*—This disease has prevailed with considerable frequency, and may now be considered as one of our common forms of disease. Twice within the past sixteen years, it has been characterized by peculiarities in its manner of developing itself. In the spring of 1844, it prevailed in a very fatal manner in my own immediate vicinity. The disease was, in its accession, almost invariably fatal; the patient would die as with a

stroke, before the initiatory symptoms had run their course. Sometimes the eruption would make its appearance, and then recede suddenly, or become of a purple color; the skin would be cold, and there would be profound coma. Sometimes the eruption would not make its appearance at all, and there would occasionally occur convulsions.

The symptoms indicated an extreme state of congestion of the important internal organs and especially of the brain. All forms of treatment were alike ineffectual, and all of the patients that exhibited these symptoms died. This form of the disease was preceded by a milder form, and its virulence diminished in a gradual manner.

During the spring of 1857, this disease prevailed throughout the range of high grounds, back from the Hudson river. It was exceedingly mild, and ran a favorable course, and a great many of the cases were not placed under the charge of a medical attendant in the first instance, but the sequel of these cases was frequently unfortunate, for in almost every one of them, was either general or local hydropic affections following, and in several instances of a fatal character. This state of circumstances was probably attributable to a sudden depression of the temperature and exposure, which occurred at the period of desquamation, which, by means of their impression upon the skin, produced serous effusions into the cavities.

*Of Rubeola.*—This disease has prevailed several times as an epidemic, but at no time has there been a malignant condition of this exanthem, and I have been induced to allude to it, for the purpose of stating that a form of disease has at times appeared amongst us, that in most of its characteristics, has been the exact counterpart of that disease. It has almost as frequeutly attacked persons who have once had measles, as it has done those who have never had it. There may be less of pulmonary irritation in this form than in the last named, though this is not always the case, for in several instances, it has seemed to originate as a catarrhal difficulty, but that is not invariably so. Its duration is perhaps shorter than that of measles, but in every other particular it holds a strict resemblance. What name to give it I am at a loss to determine. Some physicians have chosen that of roseola, but I am not clear that this is the most appropriate application of that term, and I am inclined to suspect that it is a form of exanthema, new to our section at least; if it has been prevalent for any lengthened period in other localities, I have not seen any

allusion to it in our journals or standard works, though such may have been published and not come to my notice, I should, however, be thankful for correct information respecting it, for, doubtless, many members of this society, have met with it, and investigated its nature more thoroughly than I have done.

*Of Influenza.*—In the summer of 1843, we experienced a severe visitation from this disease; so general was its prevalence that scarcely an individual escaped. It was characterized by a great degree of soreness of the muscular and integumentary system; headache, and fever of active grade and remittent character. Its average duration was from five to eight days, though the accompanying bronchial irritation would continue for a long time after. I do not recollect of any cases that proved directly fatal; but in several instances where persons were predisposed to phthisis, it served as a direct exciting cause of that disease, and was thus productive of fatal results. Since that period we have been visited by influenza quite frequently; but at no time, until the past winter, have we suffered from it to any great extent.

In the early part of the winter of 1857 and 1858, this disease made its appearance, and at first it seemed to exert its influence in giving new phazes to our ordinary catarrhal difficulties, consequently, its development was remarkably varied. The seat of its local force was the head, throat, trachea, and bronchia. In children there would be well marked croupy symptoms, and there was an extreme liability to a return of active excitement on slight exposure. Very often these relapses would take on the appearance of acute bronchitis, which was particularly liable to take on a sub-acute or chronic form. The disease would in this form, especially in children, prove very intractible, and the cod liver oil had to be used for a length of time after all febrile excitement had disappeared, to complete the cure.

In adults, the prominent seat of difficulty was the head, and the upper portion of the air passages. It would be characterized by hoarseness, coryza, and an expectoration of a tough kind of mucus.

To these would be added great lassitude and weariness, with much indisposition to voluntary motion, by reason of the muscular soreness experienced on attempts at exercise. The fever was remittent, and in some considerable number of cases it took on quite a distinctly intermittent type.

A great many of the cases were accompanied by severe neural-

gic pain and soreness of the integuments; principally located in the back of the neck, and one side of the face and temple.

After this epidemic force had exerted itself for a time, the cases that occurred would be accompanied by erratic neuralgic pains in all parts of the body. To such a degree did this peculiarity extend, that many of the cases were popularly termed rheumatism, and indeed there seemed some propriety in thus terming it, for during the same period many genuine cases of acute rheumatism were prevailing. And there was decided benefit in the treatment of these cases, to be derived from the use of tart. potass et soda, with vin colchici., superadded to the ordinary treatment usually pursued in this disease.

In such cases as were intermittent, or where there were distinct remissions, the sulph. quinine exerted its usually beneficial effects.

*Of Acute Rheumatism.*—This disease is of quite frequent occurrence in our variable climate, and has not until within a comparatively short period exhibited any variation from the ordinary course of this affection. The fever was of active grade, and patients would bear extreme depletion without any failure of the energies of the system, but of late, and especially during the past winter, when the disease assumed an epidemic form in some portions of our county, the fever was of low grade, and the treatment had to be modified accordingly. The tongue would become dry at an early period of its course, and the stamina of system would fail to such a degree as to bear stimulation well.

I have known a number of cases to terminate fatally by its effects upon the heart, in the shape of pericarditis or endocarditis. This termination usually occurred in cases where general treatment had been neglected, and a too free use of external applications indulged in.

I have witnessed its occurrence a number of times, as a complication of dysentery, and in several others it has been accompanied by great hepatic disturbance.

In the treatment of this disease I have found that a pretty strict reliance upon general principles, growing out of a belief that the disease has a specific course to run, to which may be superadded some specific remedy, is usually the most safe and successful course. I do not wish to disparage the use of certain articles that have obtained deserved notoriety in its treatment, for I am free to admit that they are superior adjuncts to proper general treatment. Conspicuous among these articles I would place the tart. potass et soda, in conjunction with vin. colchici., in as large doses as the

patient will bear, without producing hypercatharsis. I have also seen decided effects from the use of the rad. cimicifuga, and the acetic acid in the form of good sound cider, I think is fully equal to the much praised lemon juice, though neither of these are to be relied on, to the exclusion of other proper treatment.

*Of Phthisis Pulmonalis.*—This disease is also brought into activity by the extreme vicissitudes of our climate; and since I have been an observer of it, a marked change has occurred in the character of the symptoms accompanying it. In years past it was attended by a high grade of inflammation of both the parenchyma and membranes of the respiratory organs, and there was fever of ardent character. So conspicuous were these symptoms that the treatment was of necessity of an anti-phlogistic character, and it was often carried to the extent of often repeated abstractions of blood, the use of tart. antimony et potass., and almost constant counter irritation by the use of blisters, etc. But, as it occurs at the present time there is an absence of this high grade of symptoms. All of the energies of the system are required to be increased to their utmost capacity, by the use of a nutritious diet, a well regulated temperature of body, and suitable exercise in the open air, when the weather will permit. And all medicinal means have to be selected with a view to their supporting properties, and to supply the deficient materials of the system; hence the good effects of cod liver oil, and the phosphites, hypo phosphites of lime, soda, etc.

*Of Dysentery.*—Dysentery is frequently epidemic with us. It has not, however, possessed very marked peculiarities, except when it attacks children; it is then extremely liable to take on some form of cerebral disease. During the past summer it has prevailed to quite an extent in several portions of the county, and in some localities it was of malignant character, and a large percentage of deaths occurred.

*Of Erysipelas.*—Three varieties of this disease are to be met with in practice, viz: Idiopathic erysipelas, or the common erysipelatous fever; the erysipelas of young infants; and the phlegmonons or celulo-cutaneous erysipelas. This last variety has been of quite frequent occurrence for the last four years. In nearly all the cases that have come under my charge, the inflammation was situated upon the upper extremities, and had been excited by a puncture or a scratch, or perhaps more frequently by a blister caused by the use of mechanical implements in the hands of laborers.

The constitutional symptoms attending it were of a low grade, and took on a typhoid type. It was as often met with in young and vigorous subjects as any other. In many of the cases the depression of the vital forces was so marked that a vigorous supporting treatment had to be entered upon at an early period.

The local treatment found most successful, was free incisions through the diseased tissues, for the purpose of unloading the congested vessels and allowing a free discharge of the morbific poison. In retarding the spread of the inflammation along the surface and deeper structures; the application of a strong solution of nit. argent has, in my hands, been found decidedly successful.

*Of Anthrax.*—Anthrax, or carbuncle, is of common occurrence, and, when treated by a proper method, is of a comparatively mild character; but some cases have occurred, in which a fatal termination was the result of neglect, or improper treatment, at an early period of its course.

Evacuents and anodynes, with free incisions through the diseased cellular tissue, to facilitate the discharge of sloughs; and, when the case demands it, the use of quinine and brandy, will be found the most productive of good results. I have succeeded in arresting the growth of carbuncle, by an early application of dilute nitric acid, as strong as the patient could bear, three or four times a day, with emollient poultices in the intervals, and cathartics, of active nature, often repeated. This latter remedy, cannot, in my opinion, be safely dispensed with in the early stage.

*Of Paronichia.*—Paronichia, or felon, has prevailed to such an extent, for the last five or six years, as to lead almost to the conclusion that it would rank as an epidemic. Many of the cases occurring in old people, or persons of intemperate habits, were productive of serious constitutional irritation, and their treatment would demand the profound consideration of the medical attendant.

*Of Cerebro Spinal Meningitis.*—This formidable disease has at length made its appearance in a small portion of our county. At Waterford, it prevailed to a large extent, and with very fatal results. What its peculiarities were, and the number of cases, its treatment, and the results of the cases, will be set forth in a communication from Dr. P. T. Heartt, 2d. I saw a few of the cases at Waterford, and I had one, of very formidable character, in my own practice. What the symptoms were, may be

gathered from the reports to this Society at its last meeting, for I think I never witnessed any form of disease so uniformly accompanied by prominent symptoms, and so readily recognized from a mere description, as this one. Of its treatment, I am not prepared to speak positively; but it should be of energetic character, and early resorted to, to be of any avail, for one hour may be too late to commence with any expectation of success. From what I have seen of the disease, I am strongly in favor of the use of calomel, in large doses. In the case under my own treatment, I gave it to the extent of sixty grains in six hours. This patient lived, but he is, unfortunately, deprived of the power of communicating his ideas correctly—if, indeed, he has the power of judging correctly—yet his physical energies are as active, and his perception of surrounding things as accurate, as they were before the attack.* Indeed, in every case that has survived, the patient is still the unhappy subject of either mental or physical decrepitude, and whether the lapse of time will accomplish an amendment of this condition, remains to be seen. My own opinion is, that in all the severe cases, where life is prolonged, there will remain too serious a lesion of the important parts affected, to afford any reasonable hopes of a permanent recovery. One fact, in connection with the prevalance of this disease, was the frequency of pain in the head, and stiffness of the muscles of the neck, and pain in that region, experienced by a great many persons who did not suffer any farther inconvenience.

*A glance at the various forms of Fever, and the Inflammatory Diseases common to the county, as they have occurred since* 1840, *with some observations upon the change of grade in diseases generally.*—In the year 1840, idiopathic typhus fever prevailed with considerable force as an epidemic, but in 1843, the period at which I commenced practice, very little of its influence was observable, and very soon afterwards all our diseases assumed an active inflammatory grade. We had bilious remittents and catarrahal fevers in the spring and autumn, and pneumonia and pleurisy, and other inflammatory diseases, prevailing in the winter.

At this period, bilious remittent fever would often be so intimately blended in the same case with pneumonia, that it was difficult to determine which predominated. This was especially the case when the late and changeable fall weather was becoming merged into that of early winter.

* Since the above was written, the patient alluded to died of congestion of the lungs, with a considerable return of cerebro spinal disturbance.

The diseases of that period, (say from 1844 to 1850,) were of marked sthenic character, and nearly all of them required active depletory and antiphlogistic treatment. Ordinary attacks of fever were often much benefited, and their course shortened, by a resort to venesection in the earliest stages. Pneumonia could not be treated with any degree of success, without a repeated resort to the lancet. So intense was the general inflammatory excitement in this disease, that counter-irritation could not be beneficially prescribed until its use had been premised by repeated bleedings, There was emphatically in all these cases, "a blistering point," and until that had been reached by proper preliminary treatment, a blister was sure to aggravate the febrile action. The *nisus ad inflammationem* occupied a considerable period, for the exudation, which is manifested by the occurrence of expectoration, did not take place until several days had elapsed. Opium and morphia had to be used with great caution in all diseases of excitement of the vascular system, and in this form of disease its use was entirely prohibited until at a late period of its course, and even then it was an agent of doubtful propriety, for not unfrequently by its use the expectoration would be arrested and the disease kindled up anew.

Much caution on the part of the practitioner was required to guard the patients from the effects of all sorts of stimuli, and the majority of cases would convalesce much more satisfactorily without the use of either stimulants or tonics.

Active evacuents had to be freely used in nearly every case during its early stage, and often throughout its whole course.

The blood drawn in the most simple case of fever, would often afford tokens of inflammatory action, and in pneumonia it would exhibit signs of an increase of its fibrinous constituent and red corpuscles. The clot was of good size and increased in density, and not only would it present the buffy coat, but it would also have the cupped appearance.

Intermittents, which had formerly prevailed, especially along the courses of the streams where the alluvial deposit predominates, had entirely disappeared, and it was not my fortune to witness a single case of the genuine disease for the first ten years of my practice in this county.

Pleurisy was of common occurrence, and was accompanied by such a state of exalted action in the circulatory apparatus, that called for the use of active depletory measures, and its treatment

would afford an opportunity to the most sanguinary practitioner to satisfy his ardent cravings for blood.

This grade of disease continued to prevail, with the usual modification, produced by local causes, the diathesis of patients, etc., until the year 1850.

At this period we began to observe that diseases yielded to a less vigorous treatment, and that patients who were subjected to the former course were much longer in convalescing from attacks of the same disease. Stimulus was called for in the treatment of cases where it had previously been precluded, for the vital energies of the system would often become expended before a complete solution of the disease had been accomplished, and the cases would linger until the aid of stimulants and bitters were called in, and the flagging power of the patient wonld almost immediately respond to their use.

This tendency to a lower grade of action continued to increase down to the year 1855, when it culminated in the form of an epidemic of unique character, a description of which will be given in this report.

In the spring and summer of that year we had more cases of bilious intermittents than usual, in the south part of the county; and all our diseases which are classed as inflammatory, lacked most of the characteristics that entitled them to be so considered, and their treatment had to be accordingly modified, and in some instances almost reversed. An ignorance of this fact, on the part of the practitioner, would be productive of great mischief, for the course pursued at the present time is not to be found in our standard works on Theory and Practice.

A much more moderate use of the lancet is in every case indispensible, and in a large majority of them its use is absolutely hurtful.

A supporting regimen and the early introduction of stimuli is imperatively demanded.

In pneumonia the *nisus ad inflammationem* is so much shortened, that it is highly probable that the period of exudation will have occurred before the physician sees his patient, for it is a common circumstance to find the patient freely expectorating a bloody sputa, which, however, seldom possesses that viscid character which is considered pathognomonic of this disease.

Of late, typhoid pneumonia has prevailed to a considerable extent, and in some cases that have come under my observation, the blood was so depraved and the exudation into the air cells was

so abundant, that the expectoration seemed more like active hemorrhage than anything else.

Several years ago a form of pneumonia occurred which might justly have been termed bilious, for accompanying it there were very marked symptoms of bilious derangement, and in many of the cases there was pretty distinct hepatitis; there was much vomiting of bilious secretion and the sputa was of a yellow tinge instead of being bloody or rusty.

Pneumonia as it is at present occurring, seems to expend its force upon the delicate mucous structure of the terminal branches of the bronchia and of the air cells proper. Of this fact, however, I am enabled to judge, solely by the symptomatology and physical signs in these cases, for opportunities of post mortem demonstration in our common forms of disease, in the country, is of rare occurrence.

Pleurisy, for the last seven or eight years, has not been prevalent, and during an active country practice for that period, I have not met with a single case that could with propriety be termed so.

Chills are of common occurrence in nearly all our diseases at the present time, and they will occur at irregular intervals during the whole course of the disease, in many instances.

The pulse is almost always frequent but seldom hard in any of our cases; and after a short duration of disease they will often be intermittent, even in young and vigorous patients.

*Of Typhoid Fever.*—We have a form of disease which by physicians in our county is termed typhoid fever, but so far as my observation has extended, it is not that form of disease, but is rather an engrafting upon our remittent type of disease, a new set of symptoms which are mainly characterized by a low grade of action. I am the more inclined to this belief from the fact of entertaining the opinion that where malarious diseases exist to any great extent, there will be a comparative exemption from other forms of fever, and vice versa.

The nearest approach we have had to this fever will be found in the following description of a form of fever of remittent character and unmistakeably malarious origin.

*Of an Epidemic Fever which prevailed in the south part of the county in the fall of* 1855.—Late in the month of August of this year, a form of fever of remittent type made its appearance, and prevailed with a considerably fatal result. What the rate of mortality was in the practice of others, I cannot exactly state,

in my own practice, out of thirty-five cases I lost two, and I think this ratio was not lessened in the practice of my neighbors.

The peculiarity of this disease consisted as much in the negative character of its symptoms as it did in the development of any new or strange phenomena. And I have not found its parallel in any reported cases, or in the more systematic treatises on the practice of medicine.

In the transactions of this society for 1855, I find included in Dr. Willard's report on the epidemics of the sixth district, a letter from Dr. A. Baker, Jr., detailing the history of a form of fever which in many of its symptoms bears a striking similarity and was probably the same disease.

Its onset was accompanied by no symptoms calculated to awaken apprehension of trouble in its management. So gradually did it appear, that patients could with difficulty be persuaded that they were about to experience an attack.

No prominent symptoms presented themselves for the first few days. The patient would complain very little, if any. They would experience the usual premonitory symptoms of remittent fever in a mild form. If varied from this in any respect, the variation would consist in the case not exhibiting a fair average of these.

They would experience great lassitude, and feel much indisposition to physical exertion.

A loss of appetite, slight gastric uneasiness, and a paleness and increased sensitiveness of the surface. The skin would often exhibit that peculiar appearance seen in patients who were laboring under attacks of malarious cachexia or Chagres fever.

In the beginning of the cases there would be periods of chilliness without any very marked febrile paroxysm following.

Throughout the whole course of the disease there would be an unusual exemption from pain in the head or any other form of cerebral excitement. This feature was universal, except in the two fatal cases which became complicated with a form of brain difficulty, usually designated congestion.

The tongue, if at all furred at this early period, would present a short, adhesive and scanty coat, with the papilla enlarged and shining through it.

The pulse was small, compressed and slightly accelerated for the first few days. After the expiration of five or six days the fever would assume a more regular character. There would be

the usual periods of exacerbation coming on in the after part of the day, and continuing for several hours, when a distinct remission, and, in some cases, almost an intermission, would occur.

The pulse would become more full and quick, the temperature of the surface more elevated, and the skin of a dusky red appearance.

The tongue would now exhibit a more abundant coating of a dark brown appearance, and its edges would be preternaturally red.

Gastric irritability was much increased, and vomiting of an abundant morbid secretion of bright green or bluish color would most generally occur.

The bowels became loose, and were with difficulty restrained. There was considerable thirst, but the drinks could not be taken cold, and cold water had to be almost entirely prohibited, for it would act upon the bowels with the efficiency of a cathartic. Complete loss of appetite, and generally a loathing of food, was present, and it was now necessary to enforce the administration of proper aliment with as much promptness and regularity as was observed with regard to medicines.

After the continuance of this train of symptoms for a few days, and at a period of some fourteen days from the accession of the fever, a tendency to crisis would manifest itself, but in hardly any case would it accomplish a complete solution of the fever. This crisis would be suddenly followed by alarming evidences of prostration of all the vital powers. The patients' strength would in many instances suddenly forsake them, the heat of the surface diminish, and so extreme would the patients' danger appear, that in several instances I was hurriedly summoned to their bed-side on the supposition that they were dying. The cause of this alarming change was soon made apparent, for it would soon be followed by the passage of large sanguineous discharges from the bowels. These discharges occurred in about ten per cent of the whole number of the cases, and was usually of an appearance that indicated *recent hemorrhage.*

More generally, however, the tongue would become dry and dark colored, the pulse frequent, soft, irregular, and often intermittent. The bowels would be evacuated involuntarily. So frequent was this occurrence, that its absence was the exception, and not the rule. The fluid evacuated was commonly of a dirty serous character, sometimes tinged with bile, but oftener by the coloring matter of the blood. The heat of the surface, and of

the extremities in particular, would be much diminished, and the patient would lie in a listless apathetic state, but in the possession of perfect consciousness, although totally indifferent as to his situation, and averse to taking either food or medicine, in consequence of the physical exertion it required.

This condition would last for a few days, when by a rigid course of tonic and stimulant treatment, combined with the most concentrated form of animal nutriment, reaction would begin to be established, the inordinate action, or, perhaps, more properly speaking, the want of action in the bowels, would be overcome, and the discharges from them restrained.

The secretions of the mouth would be in a measure restored. The pulse would become more full, and the temperature of the body sensibly increased. As the patients began to convalesce, colliquative sweats would often occur; the fur would remove from the tongue quite suddenly, and in large flakes or strips, leaving the surface of it smooth and devoid of its papilla, or of a varnished appearance. After this sudden cleaning off, the tongue, together with the entire mucous membrane of the mouth, would sometimes become loaded with a thick coating, very much resembling the curd of milk. This coating would clear off once and again; and in every instance where it was present, it indicated a state of the mucous membrane of the alimentary apparatus that would prove one of the greatest obstacles to a speedy convalescence, and it was invariably accompanied by a complete disgust for all kinds of nourishment. In some cases of aged persons, the tongue was gashed or furrowed, and in one or two others, it, together with the mucous surface of the mouth and fauces, would be studded with patches of aphthous ulceration.

Tenderness of the epigastrium would often be present, but in no case was there any marked tympanitis.

Convalescence would in most cases be slow, and often accompanied by the formation of abscesses in various parts of the body; these would generally be ill conditioned, and discharge large quantities of sanguino-purulent fluid.

Relapses occasionally occurred, from which recovery was very slow.

As the cold weather advanced, this disease seemed to blend itself with our ordinary diseases, and its influence is felt even at the present time in all our types of disease.

Of its treatment I will merely give a general outline. We usually commenced by the administration of the blue pill, and

continued its use in moderate quantities, until it showed its effects upon the hepatic secretion. This medicine had often to be combined with opium or morphia to prevent its force being expended upon the bowels. This prescription, with slight variations, would often suffice for the early stage. Active evacuents were generally pernicious; and calomel and opium would sometimes meet the indications better than the blue pill. Counter-irritants to the epigastrium would often slightly alleviate the irritability of the stomach; but for this purpose I mainly relied upon the effervescing draught composed of tart. acid et soda, with about 20 drops tinct. opii., and taken while in a state of effervescence.

When the stage of prostration came on, entire dependence was placed upon sulphate of quinine, in conjunction with brandy and the essence of beef, which had to be given with great promptness and uniformity, for the life of the patient might be said to depend upon the strict performance of every duty on the part of his attendants and nurses.

The tannin and opium pill, or still better a pill composed of a sixth of a grain each of sulph. morphia and nit. argent, was a valuable prescription where there was looseness and unrestrained action of the bowels.

When hemorrhage from the bowels occurred, the oleum terebinth. seemed the most beneficial remedy. And where there was much tenderness of the epigastrium, a blister to that region would exert a salutary influence.

Many other remedies were, as a matter of course, required to fill up this outline, but of them it is unnecessary to speak, and their detail would occupy too much space in a report like this. I shall therefore dismiss this part of the subject and proceed to draw a few inferences from the foregoing history.

It will have been observed by those who have listened to the description of diseases detailed in a previous portion of this report, that a remarkable change has taken place in their grade as well as in their treatment, in a comparatively short term of years. It will also, on inspection of it, be seen that this change has not occurred suddenly—so as to be attributable to local causes simply—but that it seems to have been subjected to a certain well defined specific influence, that existed independent of all these. The idea of the existence of a special physical law which governs and controls the movement and general features of all our forms of disease, is, in my opinion no mere chimera, but a

veritable fact, which will force itself upon the observant medical practitioner, after a few years of practice in one locality.

Do diseases change their grade by a specific agency? That diseases of the same type are not possessed of the same character at all periods is the universal experience of medical men. Sydenham observed this fact, and was an ardent supporter if not the originator of the doctrine of specific movement. He went further than this and put forth an hypothesis to attempt its elucidation; which hypothesis is something more than fancy, and which, with your permission, I shall attempt to elaborate.

He says, when speaking upon this subject, "Whether a careful examination, such, perhaps, as could not be made in the life of one man, might show that certain tribes of epidemic disorders constantly follow others in one determinate series or circles, as it were; or whether they return indiscriminately, and without any order, according to the secret disposition of the air and the inexplicable successions of seasons, I am not certain;" but he soon afterwards informs us that such is his belief, and that he had entered upon a course of observation to determine this fact.

Dr. Rush alludes to this principle, when remarking upon the peculiarities of the yellow fever of 1794. After proceeding to show the great dissimilarity of the symptoms of this disease, he sums up by remarking that, "This detail will be interesting to physicians who wish to see how little nature regards the nosological arrangements of authors, in the formation of the symptoms of disease." This same author, in a paper on scarlatina anginosa, alludes to this same characteristic, which he says was observable in all of the diseases that prevailed between the years 1792 and 1800; this peculiarity he terms "an inflammatory constitution of the atmosphere." And again he speaks upon this same subject, when alluding to the errors of a fixed nosological arrangement of diseases. He says: "A disease which so frequently changes its form and place, should never have been designated, like plants and animals, by unchangeable characters. The oak tree and the lion possess exactly the same properties they did nearly six thousand years ago; but who can say the same of any one form of disease?"

Dr. Gregory, in commenting upon the views of Sydenham, acknowledges the existence of this same principle.

Dr. Joseph M. Smith acknowledges the existence of this same peculiarity, though under a still different name. He says: "Although it is obvious that the prevalence of contagious and infec-

tious disorders is in a manner contingent, and of course can take no place in a determinate series of epidemics, it may still be questioned whether meteorations diseases do not occur in a particular order; or, to make the question more general, whether insensible meteoration does not go through a determinate routine of modifications, at one time producing epidemics, and at other times favoring the successive prevalence of contagious and infectious diseases."

Dr. Smith, throughout his work on epidemics, makes liberal quotations from various writings, which I should be pleased to introduce into this report, but I will content myself with one more from Dr. Rush. He observes: "It is remarkable that a morbific constitution of the atmosphere sometimes exists under very different, and frequently opposite circumstances of its sensible qualities, and the same constitution of the air is often prevalent for two, three, four, or even six years."

Dr. Smith says: "The character of plague, remittent and intermittent fever, and even typhus, is often diversified by different kinds of epidemic meteorations. Sometimes these maladies call for free depletion in the early stages; whereas, at other times, they do not admit of the use of the lancet."

Prof. Geo. B. Wood says: "It has been the subject of frequent observation, that a certain epidemic tendency, after continuing for several years, will be followed by another of a different kind; which, in its turn, will give way to the former tendency, or to another differing from either. Sometimes this influence is exerted in giving rise to peculiarities in the existing forms of disease."

Prof. Tulley, in his recent work on Phamacology and Theraputics, advocates the doctrine of a change in the diatheses of disease, which, he says, occurred between the years 1805 and 1812; but he does not seem to follow the subject farther, or he would doubtless have found the necessity of recording another change which might conflict with his peculiar views of treatment.

The following abstract is taken from the archives of the Medical Society of my native county, Dutchess, and will show the order in which diseases occurred in that locality, between the years 1809 and 1825. Dr. Hunting Sherill, its president, in his annual address before that Society, states, that in the year 1809, bilious intermittents and remittents prevailed, generally assuming a typhoid character. This peculiarity continued until 1811, when there was a period of comparative health. In 1812, the disease called the winter epidemic or spoted fever, prevailed to a great

extent, and with very fatal results. The grade of this disease was typhoid or of asthenic character. This influence was felt until the year 1819, when it was followed by a sthenic grade of diseases, and this form was again overcome by those of low grade in the year 1825.

Most of the authorities quoted, it will be observed, refer this influence to epidemic origin; whether this be fact or not, remains to be determined by further observation; but we are safe in affirming that if such is the case, it is a principle, separate and aside from those specific causes of epidemics, which appear in our midst suddenly, prevail for a time, and disappear, to be followed by some one, possessing different characteristics. For both of these varieties, if they occur within a short period of each other, will show unmistakable evidences of being influenced by this force, which will render their grade alike either sthenic or asthenic, as they may happen to fall within certain positions of its sphere. And so, also, will its influence be exerted upon all of the ordinary forms of diseases and sympathetic irritations to which the human body is subjected.

Whatever may be the essential properties of this agent, is not of such an importance in a practical point of view to determine, as it is to fix upon the fact of its existence, and to determine its modus operandi, or more properly speaking, to ascertain the routine of phenomena attending its movement.

I think it clearly apparent, from what has already been adduced, that diseases change their grade within a comparatively short term of years, and also that when they have reached a certain point or maximum of force, they begin a retrograde movement, which is gradual in character, and eventually this force becomes diminished to its lowest point or minimum, and so the alternate.

Upon this supposition alone are we enabled to reconcile the incongruous views of diseases and their treatment, which have been put forth from time to time, by men equally competent to observe and determine whose system and theory is best sustained by facts.

We are, unfortunately for the credit for permanency of our profession, too well aware of the fact, that distinguished men of one period will send forth their theory of diseases, and describe the treatment best adapted thereto,—these receive for a time, the almost universal assent of the profession; but soon they begin to lose their hold upon the confidence of the practitioner, and he

institutes modifications of his own, which will alter the complexion of the treatment to such an extent, that at length he has arrived at a point where he stands upon some old, and what was supposed to be exploded premises; and old theories with new names, and in a new guise, step forward to take the place of the new. And so it is with articles of medicine; they have their periods of favor and disfavor. I do not pretend to have a sufficiently clear understanding of this subject to entitle me to the right to put forth even an hypothesis, much less to enable me to construct a reasonable theory of the manner in which this change is effected; but as I have ventured thus far, there may be no impropriety in taking one step more, and giving my own impressions concerning it.

And first, it is seen that diseases change their grade; and that this change extends to all classes of disease, whether zymotic, constitutional, or local, or whether they are sporadic, endemic, or epidemic.

Second. That this change occurs at short intervals, and observes a good degree of regularity in its periods, and

Thirdly. That, at one extreme stands the sthenic grades of disease, at the other the asthenic, and intermediately the mixed cases.

What term is best suited to express its exact nature, I have not been able to determine, but for the sake of convenience shall call it periodic movement. I am the more inclined to give it the appellation periodic movement, or mutation, from the fact that the existence of a periodic tendency is pointed out very distinctly by the operations which characterize the entire universe of nature, and that by analogy alone we should be led to suspect its development in each individual department of this great system.

We see evidences of this movement in the earth we inhabit, in the motions of the heavenly bodies surrounding it; in the regular return of the seasons; in the alternations of day and night, and in the phenomena attending the processes of growth, maturity, and reproduction of the varied species of the animal and vegetable kingdoms.

But we find man in an especial manner the subject of this movement, both in health and in disease. As evidence of this, we have only to refer to those continued physiological changes occurring in the human body, and the process of menstruation in the healthy state, with the periods of intermittents; the regularity of the return of epilepsia and mania, and the unvarying laws observed by eruptive fevers—among our diseases—and we are afforded ample illustration of its existence.

It was doubtless the observance of this tendency, which gave rise to those fanciful theories of the past, that induced a belief in lunar influence, led to the practice of consulting the signs of the zodiac, and many other excusable errors of that early period of medicine. Instances of the control of periodic influence might b greatly multiplied, but space will not permit, and I shall therefore close this report by adverting to some of the practical advantages to be derived from a further pursuit of this investigation.

By carefully watching the changes which occur in the prevailing diseases of any period, we will observe from any stand point we may take, a gradual strengthening, or diminution in the force of the system, under a diseased action, and that this process is going on silently, but steadily, from one point to another, or that diseases are, by a gradual process of shading off, assuming a new character, although the general outlines remain fixed. We shall also be enabled by thus watching, to foretell what the grade of the disease will be, which may follow the one which is prevailing.

It may be urged in discouragement of the pursuit of this investigation, that we shall not be able to unfold the mysteries in which it is enveloped. But for one, I am disposed to think differently, and while I fully admit the force of that rule in logic, which requires that facts shall be accumulated before we attempt to generalize, I am inclined also to think that facts have been long enough accumulating, for we have seen that as long ago as the days of Sydenham, the work had made a fair commencement.

It is true that in the pursuit of this subject we shall meet with great obstacles, and we may never be able to fix with mathematical certainty the periods which this movement will occupy. This is hardly to be expected, for from a variety of causes the regularity of its course may be interfered with, and its periods either shortened or protracted.

But if this movement is the subject of certain fixed laws—and who will venture to assert that it is the effect of mere chance—then the undertaking should be entered upon at once, for it is a subject of so grave import to the well being of mankind, that it would seem ungrateful to presume that a beneficent Creator had thrown about it such impassable barriers, as would effectually declare unto us, "thus far shalt thou go, and no farther."

And especially in this age of advancement are we encouraged to persevere in our endeavors to bring forth the hidden things of nature, for we behold man peering into the heavens, and studying

the laws by which its multitudinous bodies are governed. We see him harnessing the invisible vapor, and making it the servant of his will; and stretching forth his hand and grasping the lightning and sending it his obedient messenger o'er mountain height and through "old ocean depths." Who then shall say that any attempt to advance in the acquirement of knowledge in our humane profession shall languish? Or who will place bounds to man's efforts in acquiring it?